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Planning for the Effects on Personnel Readiness of Increased OPTEMPO

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature:

23 October 2006

Abstract

Planning for the Effects on Personnel Readiness of Increased OPTEMPO

The effects of increased OPTEMPO on the readiness of a force, and its personnel in particular, are of critical importance to military leadership. The reason for this concern is the increased rate of utilization of our forces, in the form of increased deployments, during a time of significant drawdown of the U.S. military. Additionally, the nature of military operations has changed in recent years from a cold war stance to increased engagement across the full range of military operations. The tempo of personnel deployment has been considered an element of strategic planning since the end of the cold war. However, consideration of factors relating to stresses on operationally deployed personnel has not similarly included in operational planning. This paper discusses the elements of unit and personnel readiness that are directly impacted by the tempo of military operations, and will identify planning process considerations that will aid operational commanders in assessing the overall unit and personnel readiness and subsequent relative combat power of assigned forces

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Introduction

Much has changed in the U.S. military since the end of the twentieth century. Specifically, the armed services have been called upon to engage in more and more operations that span the full range of military operations (ROMO)¹. Additionally, the ROMO that the United States military has been engaged in has expanded significantly in recent years to include more extended and protracted stability operations. The impact of this change on how effectively personnel are employed has been extensively analyzed at strategic levels by numerous government and non-government organizations.² However, the impact on individual units and personnel of these protracted “non-traditional” operations from an operational planning perspective has not been thoroughly considered. The changing nature of conflict and our increased military operations tempo is impacting our ability to sustain personnel in protracted military operations.

Operational commanders must have a method at their disposal to assess the sustainability of personnel in their theater of operations to ensure those personnel remain at an optimal level of readiness and subsequent relative combat power.³ They must consider a variety of variables when planning for the employment of personnel in operations across the full ROMO. These variables include not only the length of deployment of personnel and equipment, but must also consider the geographic location of an operation, the nature of the

¹ The range of military operations (ROMO) here refers to all operations from shaping to transfer to civil authorities as outlined in Joint Publication 5-0, “Joint Operation Planning.” Revision Approval Draft of 21 July 2006.

² Garnered from research conducted by the author. Refer to Bibliography for more information on studies and surveys considered.

³ For the purposes of this paper Operational Commanders include Regional Combatant Commanders, Joint Task Force Commanders, Combined Joint Task Force Commanders and others involved in operational planning.

operation across all six phases of military operations⁴, and the meaningfulness, relevance, and legitimacy of the operation. All of these variables are likely to have an effect on operational outcomes because they have an effect on the individual soldiers' and sailors' morale, unit cohesion, family support, post-operation career intentions, and personal health over the duration of a deployment.

This paper will discuss the elements of unit and personnel readiness that are directly impacted by the tempo of military operations, and identify planning process considerations that will aid operational commanders in assessing the overall unit and personnel readiness and subsequent relative combat power of assigned forces.

Background

Readiness in Terms of the Tempo of Operations

Readiness refers to the measurable capacity of our military to realize in a fairly short period of time, relative to the nature of the mission/crisis, its full potential as a source of national power in terms of its overall size, unit capabilities, and individual assets (personnel and equipment).⁵ A force's level of readiness and relative combat power also include elements that are less measurable including its integration and synergy of organizational structures and doctrine.

Two forces with apparently similar measurable characteristics may have significantly different levels of being ready to meet their potential. For instance, a military's soldiers and sailors may be similarly trained, skilled, rested and subsequently "ready", but they may or

⁴ From the Phasing Model provided for under *Planning, Operational Art and Design and Assessment* section of Joint Publication 3-0, "Joint Operations." Revision Approval Draft.

⁵ Definition of Readiness here was developed from definitions provided in the Joint Publication 1-02, "Department of Defense Dictionary of Military and Associated Terms", as amended through 9 June 2004.

may not meet mandated levels of personnel manning or authorized equipment; individual units may have different levels of unit cohesion, leadership, and training; and assigned equipment may have greatly varying degrees of maintenance. In other words, regardless of the quantity and quality of personnel and equipment, the ability to effectively maintain operationally ready equipment, provide adequate personnel rest and subsistence, and maintain high levels of unit cohesion and morale may vary radically from one unit/force to another. It is the synergy of the aforementioned factors of maintenance, training, morale, and quality of life that ultimately determine the ability of a war fighting organization to realize the full combat power and sustainability of its personnel and equipment.⁶

Changing nature of conflicts - Current Increase in Tempos⁷

Among the changes facing the U.S. military since the turn of the century is the significantly changing nature of conflicts. More and more the U.S. military is being called upon to engage in the full ROMO, with extended post-conflict stability operations in particular taking the place of more traditional Dominate-Phase operations.⁸ This change in the nature of operations has led to significant increases in basic measures of force stress for the U.S. military including Deployment Tempo (DEPTempo) and Personnel Tempo

⁶ John A. Tirpak "Working the Optempo Problem" Air Force Magazine Online, December 1997, Vol. 80, No. 12. The inseparable relationship between the increased frequency and intensity of worldwide military operations (Operations Tempo -OPTempo) and sustaining readiness can best be stated as the measure of the effects on a wide variety of elements making up that force including the force's or unit's equipment status; the level of effort needed just to maintain the day-to-day pace; the availability of adequate spares; the adequacy of training and experience of the unit's combat personnel and maintenance force; and the unit's morale.

⁷ OPTempo is military jargon for the pace of operations in terms of equipment usage and expenditure. For example, "Flying Hours", "Steaming Days" or "Driving Miles". It is also often used interchangeably with DEPTempo which is the number of days or months a unit has to deploy to execute its mission, but for the purposes of this paper OPTempo should be considered as the rate or intensity of operations in general. PERSTEMPO is generally considered the time a service member spends away from his or her home station (home station may be CONUS or OCONUS causing inconsistencies in how PERSTEMPO is reported for different services).

⁸ From the Phasing Model provided for under *Planning, Operational Art and Design and Assessment* section of Joint Publication 3-0, "Joint Operations." Revision Approval Draft.

(PERSTEMPO). As it seeks to transform to a smaller, more capable force under the mantra of “do more with less”, factors like increased personnel workload and equipment strain, and the potential for subsequent decreases in readiness must be considered.

In 2006 the United States has over 310,000 active-duty military personnel deployed outside the continental U.S. (OCONUS), this includes including those both permanently stationed and operationally deployed. In addition to these nearly one third of a million active duty personnel, there are more than 60,000 National Guard and Reserve personnel serving abroad at any given time. This number of personnel deployed overseas has been steady, or occasionally slightly higher since 2003, and of these, nearly 220,000 are currently deployed to Iraq or Afghanistan.⁹

Nearly 25 percent of the active component of the U.S. military are currently deployed or stationed overseas. Prior to 2001 the portion of active duty personnel operating OCONUS (operationally deployed or stationed) was about 17 percent.¹⁰ And, if you look at the Army in particular today, it has as much as one third of its active personnel stationed or operationally deployed overseas. This basic measure of stress on strategic and operational forces is indicative of the nature of future of military operations - high OPTEMPO supported by a shrinking force, thereby leading to increased DEPTTEMPO and PERSTEMPO.¹¹

⁹ Statistics taken from Carl Connetta, Charles Knight and Melissa Murphy, *Is the Iraq war sapping America's military power? Cautionary data and perspectives*, PDA Briefing Memo #32 Commonwealth Institute, Cambridge MA, 22 October 2004.

¹⁰ Ibid

¹¹ From personnel statistics provided by GlobalSecurity.org. 1 Oct 2006, GlobalSecurity Military Agency. Last accessed 1 Oct 2006. <http://www.globalsecurity.org/military/agency/end-strength.htm>.

Different deployment lengths for different services

The impact of increased OPTEMPO is realized by each service differently in terms of DEPTempo. Historically, the Navy and Marine Corps have deployed at a rate twice that of the Army and the Air Force.¹² This trend shifted after September 11, 2001 to the Army and Marine Corps shouldering the weight of increased OPTEMPO and resultant DEPTempo. Another factor that must be taken into consideration when measuring the stress on combat forces is the relative length of deployment, especially when considering the employment of equipment, units and individuals from one service to another. For instance, Army deployments to Iraq or Afghanistan are normally for a year or more whereas Navy and Marine Corps deployments are normally scheduled for six months to a year.¹³

Along with other commitments, the nature of operations in post-conflict Iraq and Afghanistan have necessitated the need for USMC units to deploy at a rate 25 percent higher than what is considered generally acceptable. The Army has had an even greater rise in its “normal” deployment lengths by a rate of nearly 60 percent. These rates were kept under control by the effective mobilization of National Guard and Reserve units, with a mobilization high of about 100,000 reservists deployed overseas at any given time for periods of 342 days on average. Interestingly, it has not been since the Korean War that the reserve component has been so heavily relied upon for more than the occasional brief operation.¹⁴

¹² U.S. Government Accountability Office, Report to Congressional Committees, *Force Structure: DoD Needs to Integrate Data into Its Force Identification Process and Examine Options to Meet Requirements for High-Demand Support Forces*, GAO-06-962, September 2006.

¹³ The length of deployment of Marine Corps and Navy units has often exceeded the normal 6 months since the terrorist attacks of September 11, 2001 and subsequent operations in Afghanistan, and the Coalition operations in Iraq.

¹⁴ Statistics taken from Carl Connetta, Charles Knight and Melissa Murphy, *Is the Iraq war sapping America's military power? Cautionary data and perspectives*, PDA Briefing Memo #32. Commonwealth Institute, Cambridge MA, 22 October 2004.

While it is not specifically a Regional Combatant Commander (RCC) function to analyze differing deployment rotation times among various services, it remains important for operational commanders to understand impact of these differences and incorporate them into its operational planning considerations. In the joint operating arena traditional mission areas held by the Army are being conducted by the Marine Corps and vice versa. An example of shifting missions among services is the recent development of Civil Affairs (CA) and Customs Inspections (CI) missions for the Navy; missions that are traditionally held by the Army. The additional factors a commander must consider when planning for the employment of new Navy CA or CI units is that Navy personnel have traditionally only deployed for six to eight months at a time. The impact of a year-long deployment on an all-Navy unit will likely be significant fatigue, low morale and a potentially extended reset (rest) time necessary before the unit can be redeployed.

Discussion/Analysis

Effects on Equipment of Increased OPTEMPO

Estimates provided by the Army to the Government Accountability Office indicate that in April 2005 it had already rotated nearly 40 percent of its combat equipment through Iraq and Afghanistan. Similarly, the USMC estimated that 40 percent of its land based equipment and nearly 20 percent of its air assets had been used to support operations in the Middle East.¹⁵ “Wear and tear” on equipment has been unusually high since the U.S. military’s engagements in Afghanistan and Iraq due to the nature of the hot and sandy

¹⁵ William M. Solis, *Preliminary Observations on Equipment Reset Challenges and Issues for the Army and Marine Corps*, Testimony Before the Subcommittee on Readiness and Tactical Air and Land Forces, Committee on Armed Services, House of Representatives (Washington DC: Government Accountability Office, 30 March 2005).

environment. Additionally, the rate at which equipment is being used has increased by a factor of 10; a rate that diminishes service life significantly.¹⁶ Indicative of the concern for over-usage of equipment was a Government Accountability Office survey in October 2005 of 30 critical types of equipment across all services and concluded that the readiness ratings for the majority of them had decreased significantly since 1999.¹⁷ Included in the list of equipment were tanks, armored fighting vehicles, utility trucks, helicopters, and combat aircraft.

To respond to the increased demand on equipment, the Army and Marine Corps have adopted a maintenance approach that leaves equipment “in the field” for much longer than originally intended. While this approach ensures immediate equipment availability for rotationally deployed troops, it has caused the services to tap into much of their pre-positioned equipment and in some cases into the equipment stocks of garrisoned CONUS units. Utilizing the equipment of stateside units forces those non-deployed units to face an equipment shortage that ultimately affects personnel training and morale. Evidence of the negative impact of “borrowing on the future” in terms of equipment service life is the fact that many stateside units have been forced to forgo major depot level maintenance on equipment due to equipment shortages forced upon them by having to redirect equipment to

¹⁶ Garnered from a summary made by Conetta, Carl, *Fighting on Borrowed Time: The Effect on U.S. Military Readiness of America's post-9/11 Wars*. Project on Defense Alternatives Briefing Report #19, 11 September 2006. Last accessed 29 September 2006. <http://www.comw.org>. Based on assessments on the condition of Army and Marine Corps equipment in: Loren B. Thompson, Lawrence J. Korb, and Max A. Bergmann, *Marine Corps Equipment After Iraq* (Arlington, VA and Washington DC: Lexington Institute and the Center for American Progress, August 2006; and Loren B. Thompson, Lawrence J. Korb, and Caroline P. Wadhams, *Army Equipment After Iraq* (Arlington, VA and Washington DC: Lexington Institute and the Center for American Progress, May 2006)

¹⁷ *Military Readiness: DoD Needs To Identify and Address Gaps and Potential Risks in Program Strategies and Funding Priorities for Selected Equipment*. Government Accountability Office, Washington DC, GAO-06-141, October 2005.

deployed units.¹⁸ This approach will have a long term effect on equipment readiness as equipment continues to simply wear out and fail to be replaced in a timely manner. While there are efforts underway to reset equipment for deployed and stateside units, these units will have to make do with inadequate and failing equipment in the meantime. The timelines for current equipment replacement/replenishment in the Middle East, as estimated by Lieutenant General David Melcher, Army Deputy Chief of Staff, indicate a minimum delay of at least two years.¹⁹ Delays of this nature must be considered by operational commanders in their operations and logistics planning in order to ensure the balance of equipment employment cycles and maintenance cycles does not tip unfavorably toward early obsolescence.

Effects on Personnel of Increased OPTEMPO

Characteristics of “wear and tear” on equipment can be similarly applied to personnel in a high tempo military environment. Much the same as overuse of equipment in high demand environments can significantly degrade a force’s combat readiness, especially if effective steps are not taken to ensure it gets appropriately maintained or replaced, so too can high tempo operations and deployments impact the sustainability of personnel combat readiness. Morale is probably one of the best indicators of personnel “wear and tear”. As an example, recent studies have shown troubling indications of increase in suicide rates corresponding with increased deployment tempos since the beginning of operations in

¹⁸ *Preliminary Observations on Equipment Reset Challenges and Issues for the Army and Marine Corps*, statement by William M. Solis, U.S. Government Accountability Office, Testimony Before the Committee on Armed Services, Subcommittee on Readiness and Tactical Air and Land Forces, U.S. House of Representatives, Second Session, 109 Congress, 30 March 2005.

¹⁹ *On Army Equipment Reset*, statement by Lieutenant General David F. Melcher, Deputy Chief of Staff and Major General J. K. Edmunds, Assistant Deputy Chief of Staff, U.S. Army, Testimony Before the Committee on Armed Services, Subcommittee on Readiness and Tactical Air and Land Forces, U.S. House of Representatives, Second Session, 109 Congress, 30 March 2005.

Afghanistan in 2001 and Iraq in 2003²⁰. Suicide rates have to be considered only as anecdotal evidence of an overall decrease in morale, and caution should be applied when making a single direct connection between reported suicide rates and combat readiness. However, the effect of not considering connections between the intensity of OPTEMPO and DEPTTEMPO on the state of mind of overstressed combat forces, and its subsequent effect on personnel readiness in the form of drastic emotional outcries like suicide, would be to overlook significant major indicators of overall unit and personnel stress.

Effects on Training and “Reset Time” of Increased OPTEMPO²¹

While an operational commander should expect that forces deployed into his area of responsibility (AOR) to support theater specific operations have been effectively trained, equipped and rested, the reality in the early stages of the twenty-first century is that personnel are often managed in much the same way as equipment.²² The method of “borrowing on the future” with regard to personnel training, deployment, employment, redeployment and reset will likely have similar effects on personnel as with equipment - accelerated “wear and tear” that leads to early failure. Even before a unit is deployed to a theater and employed in any number of roles across the ROMO, consideration should be made for the intensity of training

²⁰ Conetta, Carl, *Fighting on Borrowed Time: The Effect on U.S. Military Readiness of America’s post-9/11 Wars*. Project on Defense Alternatives Briefing Report #19, 11 September 2006. Last accessed 29 September 2006. <http://www.comw.org/>

²¹ “Reset time” includes a range of non-combat operations, generally in CONUS or at a permanent station, of garrison duty, “stand-down” and “reset”. Garrisoning is the function of maintaining units assigned to a base or area for defense, development, operation, and maintenance of facilities. Garrison duties also include the training and administration of personnel in the performance of day-to-day non-combat activities. “Stand-down” refers to post-operational deployment periods with no significant operational commitment when units enjoy increased periods of rest and recuperation and leave and liberty. “Reset” refers to the process of replacing, repairing, and maintaining personnel and equipment for subsequent operational deployment or redeployment. Developed from definitions provided in the Joint Publication 1-02, as amended through 9 June 2004, Department of Defense Dictionary of Military and Associated Terms.

²² Report to Congressional Requestors, *Military Readiness: A Clear Policy is Needed to Guide Management of Frequently Deployed Units*. United States General Accounting Office, GAO/NSIAD-96-105, April 2005.

cycles for stateside units preparing to deploy. There are a number of parallels that can be drawn between deployment cycles and training cycles in terms of the readiness of personnel to meet operational requirements. For example, training intensity can become a significant stressor for sailors and soldiers because training exercises or “work-ups” may last for weeks.²³ Long training evolutions whether near to a home base, at sea or OCONUS can create family separation beyond that expected during an operational deployment. For example, sailors stationed in San Diego may be required to conduct training operations off the coast of Catalina Island for a week or so at a time. While Catalina Island is only a few miles off the coast of southern California, the fact that sailors are separated from their families for the duration of the training exercise and unable to maintain close contact has a significant impact on the morale and motivation of that sailor as he approaches a “full” deployment of six or more months. Research supports the idea that training cycles can have a significant impact on the stress of personnel preparing for deployment. In particular, a study completed in 1998 of Army personnel in extended training exercises reported higher levels of distress, lower morale, and increased incidences of physical maladies than those in a stand-down period.²⁴ These results suggest that an individual sailor or soldier may be in a state of decreased readiness during periods of intense pre-deployment work-ups. They further suggest that the tempo and workload of all operations, both pre-deployment training operations and deployments engaged across the full ROMO, should be considered when planners assess OPTEMPO and DEPTempo.

²³ “Work-ups” are considered pre-operational deployment periods of varying lengths of time during which increased unit and personnel training are conducted.

²⁴ Paul D. Blise, Sandra M. Escolas, Richard Christ, and Carl A. Castro, “Human Dimensions Assessment of Task Force XXI Technological Advancements,” Defense Technical Information Center Report, Document ADA 349889, Alexandria, Va., 1998.

Current Operational Planning Doctrine

Factors relating to the material condition of equipment and morale of personnel, must be considered in the framework of balancing training exercises and stand-down periods for pre-deployment units. In other words, planners must carefully consider the readiness of personnel and units deploying into a theater of operations in order to effectively match capabilities to assigned tasks. In particular planners must consider the links between workloads over extended periods of time and personnel readiness.

Currently planning doctrine addresses strategic considerations for OPTEMPO and DEPTMPO in the Joint Operation Planning and Execution System (JOPES) policy and procedure guide for the Personnel Estimate.²⁵ The personnel estimate includes assessment of the personnel situation with regard to factors that may influence proposed operational courses of action. This analysis is focused on issues of appropriate force structure including personnel authorizations for specific units and subsequent unit capabilities. However, the personnel estimate does not adequately address factors of personnel sustainability across the range of military operations. Similarly, planning doctrine does not effectively incorporate assessment of personnel sustainment across the phases of operational planning. Some would consider personnel sustainment and readiness to be a purely strategic planning issue, but if operational commanders fail to consider the impact of varying workloads on personnel in their ability to maintain an expected level of combat power, they are likely to overextend the combat capability of their force and be incapable of countering the strengths of their adversary. While the planning guidance suggested by Joint Operation and Planning System (JOPES), Volume II, Planning Formats and Guidance, for personnel matters includes sub-

²⁵ CJCSM 3122.03A , 31 December 1999, Joint Operation Planning and Execution System, Vol. II, Planning Formats and Guidance. Joint Staff, Washington DC.

categories of “Specific Guidance” for assessing the rotation/replacement of personnel; morale, welfare and recreation (MWR); and leave policies; the level of analysis expected in these sub-categories is left unclear.²⁶ Further, the policy and procedure guidance in JOPES Volume I potentially leaves unanswered the impact of extended operations on the overall readiness of personnel.²⁷

Recommendation

Considering the Role of Personnel Assessment in Operational Planning

A model to consider in planning that may aid in understanding and analyzing the impact of OPTEMPO on relative combat power, suggested in work by Carl A. Castro and Amy B. Adler, is that there may be a point of optimal OPTEMPO that falls somewhere in the range of operations between garrisoning, deployed operations, and post-deployment stand-down and reset.²⁸ While this may seem obvious from a strategic standpoint it also presents an interesting option for operational planners; assessing the factors of time, space and force in terms of the individual soldier or unit. Specifically, operational planners can assume that as OPTEMPO increases there will be an initial increase in operational readiness and capability of troops. This increase in readiness will likely continue to rise even into the early stages of combat operations. However, as military operations, including post-conflict operations, extend and potentially become protracted, the relative readiness in terms of “wear and tear”, morale, and unit cohesiveness will likely go down (fig. 1).

²⁶ Ibid.

²⁷ CJCSM 3122.01, 14 July 2000, Joint Operation Planning and Execution System, Vol. I, Planning Policies and Procedures., Joint Staff, Washington DC.

²⁸ Castro, Carl A.; Adler, Amy B.; *OPTEMPO: Effects on Soldier and Unit Readiness. Parameters*; Autumn 1999; 29,3; Military Module pg. 86

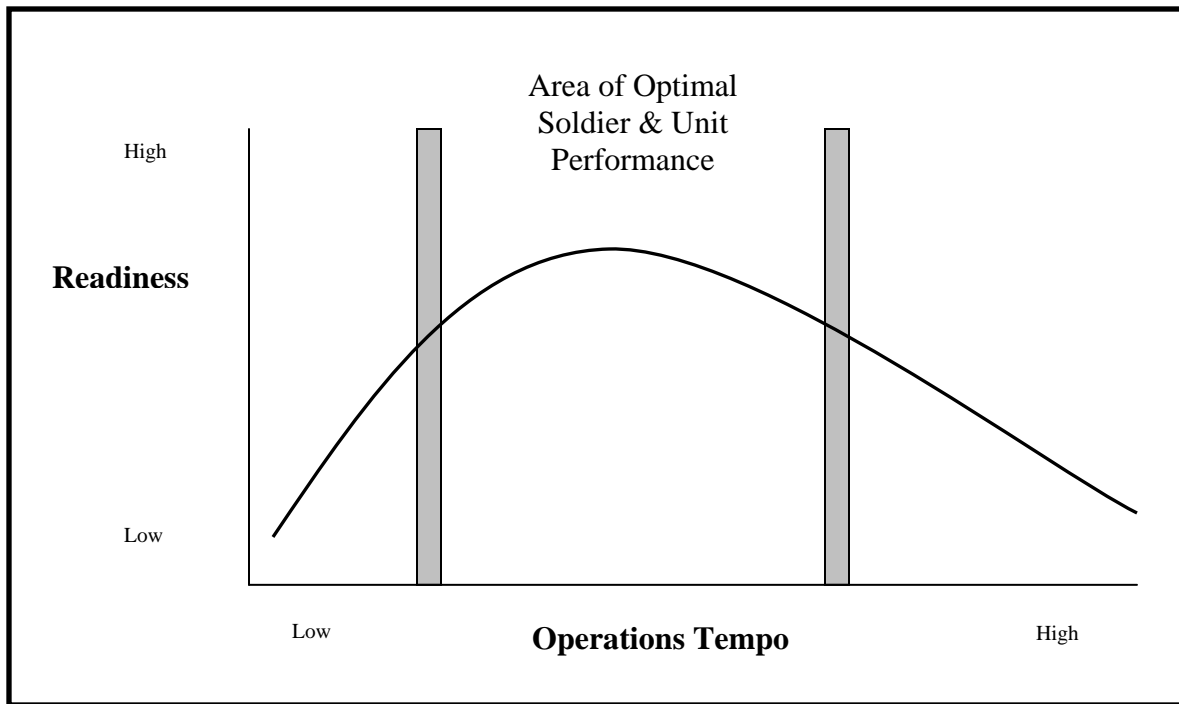


Fig. 1. Operations Tempo and its relationship to readiness²⁹

When preparing a personnel estimate, planners should assess the initial readiness of combat forces available and balance this against the anticipated length of employment for specific operations. Additionally, there should be consideration for potential points of failure within units and personnel by preparing options that ensure the OPTEMPO in theater does not exceed that which maintains an optimal level of operational readiness of personnel. Factors to consider include programs to ensure periodic rest and relaxation, means to communicate in a timely fashion with friends and family, and potentially a means to ensure that individual PERSTEMPO does not become excessive while forward deployed.

Planners must be aware of factors that influence personnel morale, fatigue and unit cohesion in order to effectively assess the impact of potentially extended or protracted

²⁹ From a drawing by C. Castro and A. Adler in *OPTEMPO: Effects on Soldier and Unit Readiness. Parameters*; Autumn 1999; Vol. 29 Issue 3; p.93.

military operations. An awareness of these factors will serve to ensure that operational commanders are well positioned to maximize the relative combat power of their forces without overextending and possibly reaching a point of excessive fatigue and possible personnel failure.

Proposed Solutions for Planning Doctrine

While there is some guidance provided in the Joint Operations Planning and Execution System (JOPES) Volume I, Planning Policies and Procedures, the guidance should be expanded to provide clarification of specific “Personnel Factors” to address when determining the “Personnel Situation” and the “Personnel Analysis of Own Courses of Action.” Planners should be guided to consider elements of human “wear and tear” from a perspective of the level of training received by deploying personnel, turn-around-times, and intensity of anticipated operations.³⁰ Additionally, planners should assess facilities and means available to provide intra-theater personnel reset capability - rest and recuperation (R&R) and MWR programs, intra-theater operational training, and equipment maintenance. The guidance should detail measures of personnel tempo with reference to factors affecting personnel readiness. For instance, address the number of combat patrols anticipated, days in an “up” combat ready stance, or days in a leave or liberty stance against means to mitigate their impact on personnel stress - the locations, nature and frequency of intra-theater personnel reset programs.

To aid in structuring an assessment of the “Personnel Situation” required by JOPES, specific “Personnel Factors” need to be created and included in planning documents for

³⁰ Turn-around-times here refer to the cycle times of demobilization, stand-down and reset prior to redeployment of units and personnel.

reference during its development.³¹ Specifically, “Personnel Factors” should be considered for assessment against various proposed Courses of Action (COAs). Recommendations for a framework of specific “Personnel Factors” are:

1. Personnel Turn-Around - Anticipated duration of direct combat operations of tactical units and planned turn-around capability. Is the nature of planned operations likely to extend beyond normally prescribed deployment periods? Can personnel be rotated on a periodic basis to allow for intra-theater R&R?

2. Personnel reserve - Availability of intra-theater reserve forces to alleviate extended unit level combat operations. Do operational plans consider rotation of deployed forces from an “front-line” status to a reserve status?

3. R&R infrastructure - Availability of facilities or programs providing for in-theater R&R, morale building and contact with family/friends. Is there a capability to develop and utilize intra-theater recreation facilities? Is there a means to facilitate rotation of personnel from the “front-lines” to R&R facilities on a periodic basis?

4. Training/maintenance - Availability and opportunities for intra-theater operational training/maintenance evolutions. Can training be conducted simultaneously with planned operations? Are facilities (mobile or static) available to conduct operational skill refresher training?

Assessment of the aforementioned factors must be stated in terms of their effect on the combat potential and relative combat power of forces available to the operational commander. Additionally these factors should be evaluated when analyzing various friendly COAs from a perspective of their impact on planned operations.

³¹ Personnel Factors should be inserted into the Personnel Estimate proposed in JOPES Vol. I, Annex B to Enclosure T under paragraph 2.h.

Conclusion

Higher than normal OPTEMPO maintained over extended periods of time are known to have an adverse affect on equipment lifecycles.³² Similarly, high OPTEMPO can have a significant effect on unit/personnel morale if not addressed by operational planners. Not only can increased OPTEMPO and subsequent DEPTTEMPO and PERSTEMPO have a specific negative effect on tactical war fighting capability in that it can literally wear down equipment and personnel to the point of failure, but it is also likely to have long term strategic effects in terms of training, readiness, retention, recruiting and even important public support if it is left unchecked at the operational level.

Considering the pace of U.S. military operations around the world including extended peacekeeping and post-conflict stability operations, and the “do more with less” approach to personnel management in recent years, it is time to look closely at how to ensure operational planners can balance the intensity of extended operations against the sustainability of personnel readiness and morale. By engaging issues relating to the stresses on personnel engaged in extended conflict and post-conflict activities in the planning phase of an operation, commanders will be better assured of maintaining personnel readiness at an optimal level and thereby ensuring an advantage over his adversaries in terms of relative combat power and sustainability of operations.

The complexity of this topic demands a much more thorough analysis and a more fully developed solution than can be addressed in the scope of this paper. Excluding a thorough analysis of the impact of human factors on operational outcomes from our ongoing

³² William M. Solis, *Preliminary Observations on Equipment Reset Challenges and Issues for the Army and Marine Corps*, Testimony Before the Subcommittee on Readiness and Tactical Air and Land Forces, Committee on Armed Services, House of Representatives. Government Accountability Office, Washington DC, 30 March 2005.

development of a standardized Joint operational planning doctrine will not serve the soldiers and sailors of the future well. It is incumbent upon today's military leaders to ensure that all factors affecting operational outcomes are fully analyzed and understood, and subsequently incorporated into the tools, policies, processes and procedures used by planners in order to insure U.S. military forces are fully equipped and ready to engage any adversary of the future.

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